

METHOD OF MEASURING COATING USING TWO-WAVELENGTH INFRARED REFLECTANCE

ABSTRACT OF THE DISCLOSURE

5 A non-destructive method is provided for measuring a non-scattering coating on a
non-specular or specular surface of a metallic substrate. The surface may be a rough surface,
such as a chemically milled surface. Infrared energy is transmitted into an integrating sphere
that is in physical contact with a sample of the coating on the metallic substrate. The infrared
energy is partially absorbed by the coating. The infrared energy is in part specularly reflected
by the metallic substrate and is in part scattered by the metallic substrate depending on the
10 wavelength of the infrared radiation. The integrating sphere integrates and collects total
reflectance of the infrared energy. Infrared detectors detect the total reflectance at two
wavelength bands. A decrease in total reflectance in one of the two wavelength bands
indicates presence of the coating or may be mapped to an amount of the coating.

